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ABSTRACT

The Arabidopsis NI16 and NI19 genes are isolated in a yeast 2-hybrid screen via their interaction with the NIM1 protein and encode proteins involved in the regulation of SAR gene expression in plants. NI16 is strongly induced in NIM1-overexpressing plants treated with benzo(1,2,3)thradiazole-7-carbothioic acid S-methyl ester (BTH). Homologues of the NI16 gene from potato and tomato are also provided. The NIM1 interactors can be expressed in transgenic plants, either alone or in combination with the NIM1 protein, to increase expression of SAR genes such as PR-1. The nucleic acid sequence of the Arabidopsis NI16 promoter is also disclosed herein.